Reviewer's report

**Title:** Comparison of Outpatient Health Care Utilization among Returning Women and Men Veterans from Afghanistan and Iraq

**Version:** 2  **Date:** 8 April 2010

**Reviewer:** Matthew Maciejewski

**Reviewer's report:**

The authors were responsive to the prior reviews, and the revised manuscript is much improved. There are a number of issues that need to be addressed to clarify and strengthen the paper to be most useful for BMC HSR readers and researchers who study veterans.

**MAJOR COMPULSORY REVISIONS**

1. **Tables**
   a. Tables 1 and 2 are very helpful and interesting as in the prior draft.
   b. The addition of tables comparing female users and non-users (Table 3) and male users and non-users (Table 4) are helpful, but are not consistent with the regressions presented in Table 5. Since the logistic regression examines gender differences in outpatient care use, the relevant Table 3 would compare male non-users and female non-users. Since the negative binomial regression examines gender differences in the number of outpatient visits, Table 2 is the relevant table that presents these differences between male users and female users. The authors are strongly encouraged to reorganize the tables so Table 2 is the comparison of male non-user to female non-user and move Table 2 to Table 3.
   c. These tables should also report the mean observation time and some descriptives on mean, median, standard deviation, min and max number of outpatient visits (Tables 1 and 3 only, if Table 2 is non-user comparison).
   d. The discussion would have to be revised somewhat to be consistent with these recommended changes. It will also be important to explicitly state the comparison group in unadjusted differences, because the current text reads "Women non-users were more likely to be non-white, have private health care insurance, ...." without stating whether the comparison group was women users or male non-users. That is critical for the reader to be able to follow the comparisons.

2. **Hypotheses.** The paper states (on page 4) what the objective of the study is, but never states what the authors expected. Did they expect women to have higher probability of use and more visits than men? If so, why? It would be helpful to provide a hypothesis and rationale for it. It would also be helpful to conclude with a statement about the contribution of this paper to the literature.
2. Implications. Related to the hypotheses is the summary of the contribution in the revised discussion (page 9, paragraph 2), which the authors revised. The authors state: "the issues discussed here represent contributions to current health services research and suggest general recommendations to improve health care utilization by women...Our preliminary data suggest the need to provide high quality, gender-specific care." This revised statement raises two questions:

a. As in my prior review, what are the contributions exactly? Please state them instead of positing that to be the case.

b. It is not clear how recommendations can be suggested on the basis of this analysis, because there is no inference from the results that health care utilization is suboptimal in any way. If the paper explicitly stated that no improvements would be needed if women had similar or more use than men, then that might be a basis for suggesting improvement. If the paper had considered clinical outcomes or costs, that might have been another basis for defining improvement. However, no such outcomes were considered and no criteria for defining needing improvement or "just fine" were provided. So, it is not clear what is meant by this statement. No recommendations are actually provided, so please revise this paragraph.

MINOR ESSENTIAL REVISIONS

1. Discussion of non-VA literature on male-female differences.

   a. The addition of gender differences from non-VA literature is a great addition. The mention that women report higher health care use than men is not quite right, however. The Mustard 1998 NEJM reference actually shows that expenditures by women is lower than that of men below age 15 or so and above age 70 or so. The authors should qualify this statement and highlight that expenditures are higher in the age range of the study sample. The authors may also want to refer to a 2007 paper by Kjerulff KH, Frick KD, Rhoades JA, Hollenbeak in Women’s Health Issues that shows the incremental cost differences associated with female-only health issues.

   b. The mention of age, marital status, income and education levels being associated with health care utilization needs to be clarified about whether these factors differ between men and women, and prior literature showing the interactive effect of these factors with gender to make the point clearly, which would provide clear motivation for the interaction terms that were examined in this paper.

2. Statement about women’s VA health services use being a new area. This statement may have been true in 1998 (the year the Hoff and Rosenheck paper was published), but it is no longer true. The authors cite studies by Washington and Yano later in the discussion to illustrate that there is prior work in this area. What IS new is the use of VA health services by OEF/OIF female veterans. That is a more accurate statement.

3. It is not clear why CBOC as a "usual site" was not controlled in the analysis. If
the authors got the utilization data from OPC, then it is possible to identify CBOC users using the STA5A indicator. If OPC data was used, then the authors should construct such a variable and add it to the Tables, regression and discussion. That would preclude the need to discuss this as a limitation in the discussion. If local data was extracted, then it may still be possible to identify a CBOC user.

4. Please clarify for readers (particularly people not familiar with VA data) what specific types of outpatient care are included in this aggregate category. Some readers might think that outpatient visits refer only to face-to-face care (e.g., primary care, specialty care, mental health), so it is important to clarify that lab visits, radiology visits, visits to outpatient pharmacy, telephone care, and a host of other types of outpatient care (e.g., chaplaincy) are included in this broad category.

5. The discussion of unadjusted visits on the top of page 8 is provided without a supporting table. Please add that data into the respective tables, so the reader can see these numbers themselves.

6. Need to add a limitation that the insignificant main effects and interactions may have simply been due to insufficient power.

DISCRETIONARY REVISIONS

1. Consider citing the 1983 Duan Manning paper that is the classic reference for the two part model in addition to reference 18 (page 5).

2. Consider providing the specific % of male users (44.8%) and female users (53.3%) with the p-value on page 7.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I am a VA HSR&D researcher as are most of the authors. No other competing interests to declare.